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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,188	07/09/2001	W. Benjamin Payne		5756

7590 06/26/2003
Frank C. Price
13812 Sand-hurst PL
Santa And, CA 92705

EXAMINER

FRANK, RODNEY T

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,188

Applicant(s)

PAYNE, W. BENJAMIN

Examiner

Rodney T. Frank

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 2 of the specification, you state that the present invention can be seen as a coating either painted on the tank or attached as a paper thin film, for a pressurized tank. How can you "paint" on a device such as described in the specification. If the device has multiple areas in various columns, then a "painting" process onto a tank could not achieve this.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner doesn't understand how such a device could be "painted" onto the tank itself and still operate since everything in the prior art teaches that this type of device is made in various layers and would not be able to just be painted to form those multiple layers.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. Patent Number 6,260,414; hereinafter referred to as Brown). Brown discloses a cholesteric liquid crystal fluid level indicator that determines the level of a cooled liquid, such as beer, in a closed, opaque keg when placed in thermal contact with the exterior surface of the keg, by producing a color change that is a function of the liquid temperature when the liquid is within a predetermined temperature range, the indicator comprises a multiple level strip having a top transparent layer, liquid crystal layer, a black background layer and an attachment layer employing a protected adhesive on its bottom surface for removably attaching the strip to the keg, the instant invention employs a heat conducting adhesive on the attachment layer and for securing certain layers in the strip, such as the liquid crystal layer (see abstract).

With respect to claim 8, though the examiner admits that the device is used for a beer keg, it is still used on a storage tank and it does measure gas pressure changes within a tank (see column 12 lines 38 through 64 for the basic operation of the device where a color change in relation to gas and temperature is clearly disclosed) and this could obviously be adapted to that exact purpose by one of ordinary skill in the art. With this in mind, a method for tank ullage determination using temperature sensitive pigments, comprising said temperature sensitive pigments within color changing coatings applied to a tank outer surface of the wall of the tank, said coatings when changing color allowing indications imprinted within said color coatings to be read, said indication defining for a given future temperature the change in pressure of gas stored within the tank as determined by the common gas laws.

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With respect to claim 9, figure 3 and column 11 line 44 through column 12 line 64 disclose coatings formed in distinct areas, each area sensitive to a particular color-changing temperature. Figure 5 shows, and column 10 lines 36 through 49 describe that the strip could comprise indicia, which could be of any type, including numbers, which would be useful for displaying information of the tank contents.

With respect to claim 3, a coating attached via film technology is disclosed.

With respect to claim 4, the areas are shown in figure 3 and column 11 line 44 through column 12 line 64 to be organized in groups, each group corresponding to a final temperature of the tank.

With respect to claim 5, the indications represent the amount of liquid and gas available compared to a filled tank at the same pressure.

With respect to claim 6, the numbers can represent any useful information, such as pressure, as disclosed in column 10 lines 36 through 49.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hodson et al. (U.S. Patent number 3,585, 381) just gives a general state of the art for such a temperature indicating device as disclosed in the present application. JP 2001090899 A discloses a liquid level detector, for liquefied petroleum gas, comprises heat conducting thin plate stuck to outer circumferential surface of storage tank and detecting part formed by coating thermosensitive film to thin plate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (703) 306-5717. The examiner can normally be reached on M-F 9am -5:30p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

RTF

June 21, 2003

A handwritten signature in black ink, appearing to read "Hezron Williams", with a long horizontal line extending to the right.

HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800